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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/666,029	09/17/2003	Dan Arquilevich	10019566-5	7944

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EXAMINER

STEWART JR, CHARLES W

ART UNIT	PAPER NUMBER
2853	

DATE MAILED: 09/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/666,029

Applicant(s)

ARQUILEVICH ET AL.

Examiner

Charles W. Stewart, Jr.

Art Unit

2853

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 and 55-64 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-29 and 55-64 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

Detailed Action

Double Patenting

1. The nonstatutory double patenting rejection is based on a judicially created doctrine ground in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 428, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321 (May be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-29 and 55-64 rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-23 of Arquilevich et al. U.S. Patent No. 6,764,158.

In claim 1, respect to claim 1, Arquilevich et al. discloses an optical sensor system for a hardcopy device, comprising: a housing defining an outgoing light path and an

Art Unit: 2853

incoming light path; plural light emitting elements sharing the outgoing light path to illuminate an object within the hardcopy device; and a sensor which receives light reflected from the illuminated object through the incoming light path.

In claim 2, with respect to claims 4 and 21, wherein the plural light emitting elements comprise three elements each emitting different colors.

In claim 3, with respect to claim 5, wherein: a first of the three light emitting elements emits a blue light; a second of the three light emitting elements emits a green light; and a third of the three light emitting elements emits a red light.

In claim 4, with respect to claim 6, wherein: the first of the three light emitting elements emits a blue light having a wavelength with a centroid of 454-484 nanometers; the second of the three light emitting elements emits a green light having a wavelength with a centroid of 515-545 nanometers; and the third of the three light emitting elements emits a red light having a wavelength with a centroid of 630-660 nanometers.

In claim 5, with respect to claims 6 and 23, wherein: the first of the three light emitting elements emits a blue light having a wavelength with a centroid of 459-479 nanometers; the second of the three light emitting elements emits a green light having a wavelength with a centroid of 520-540 nanometers; and the third of the three light emitting elements emits a red light having a wavelength with a centroid of 635-655 nanometers.

In claim 6, with respect to claim 8, wherein: the first of the three light emitting elements emits a blue light having a wavelength with a centroid of 469 nanometers; the second of the three light emitting elements emits a green light having a wavelength with

Art Unit: 2853

a centroid of 530 nanometers; and the third of the three light emitting elements emits a red light having a wavelength with a centroid of 645 nanometers.

In claim 7, with respect to claim 24, a fourth light emitting element which emits an orange light.

In claim 8, with respect to claim 25, wherein the fourth light emitting element emits an orange light having a wavelength with a centroid of 592-622 nanometers.

In claim 9, with respect to claim 8, wherein the fourth light emitting element emits an orange light having a wavelength with a centroid of 597-617 nanometers.

In claim 10, with respect to claim 25, wherein the plural light emitting elements each comprises a light emitting diode.

In claim 11, with respect to claim 1, a circuit board with each light emitting element being directly mounted thereto.

In claim 12, with respect to claim 1, wherein the sensor is also directly mounted to the circuit board.

In claim 13, with respect to claims 1 and 20, wherein the sensor receives diffuse light reflected from the illuminated object.

In claim 14, with respect to claim 2, wherein: the housing defines a second incoming light path; and the optical sensor system further includes a second sensor which receives specular light reflected from the illuminated object.

In claim 15, with respect to claim 3, an ambient light shield coupled to the housing and defining a light exit and entrance chamber between the outgoing and incoming light paths and the illuminated object.

In claim 16, with respect to claim 14, a lens assembly between the outgoing and incoming light paths and the light exit and entrance chamber.

In claim 17, with respect to claim 14, a filter element between the incoming light path and the lens assembly.

In claim 18, with respect to claim 14, a lens assembly between the outgoing and incoming light paths and the illuminated object; and a contaminant shield between the lens assembly and the illuminated object.

In claim 19, with respect to claim 15, an ambient light shield supported by the housing and replaceably receiving the contaminant shield.

In claim 20, with respect to claim 16, illuminating an object within the hardcopy device with plural light emitting elements each sharing a common light path; receiving light reflected from the illuminated object; and interpreting information about said parameter from the received reflected light.

In claim 21, with respect to claim 5, wherein: said illuminating comprises sequentially emitting three different colors of light; and said receiving comprises sequentially receiving said three different colors of light reflected from the illuminated object.

In claim 22, with respect to claims 5 and 22, wherein said three different colors of light comprise blue, green and red.

In claim 23, with respect to claims 7 and 24, wherein said illuminating comprises sequentially emitting a fourth color of light different from said three different colors of light.

Art Unit: 2853

In claim 24, with respect to claims 5 and 6, wherein said four different colors of light comprise blue, green, red and orange.

In claim 25, with respect to claim 16, wherein: said receiving comprises receiving said reflected light with a sensor; and the method further includes supporting each of the plural light emitting elements and the sensor on a circuit board.

In claim 26, with respect to claim 16, wherein: said receiving comprises receiving diffuse reflected light with said sensor, and receiving specular reflected light with a second sensor; and said supporting further comprises supporting said sensor and said second sensor on said circuit board.

In claim 27, with respect to claim 12, shielding ambient light from interfering with said illuminating and said receiving.

In claim 28, with respect to claim 15, wherein: said receiving comprises receiving said reflected light with a sensor; and the method further includes shielding said plural light emitting elements and said sensor from contaminants with a contaminant shield.

In claim 29, with respect to claim 16, wherein following said shielding, the method further includes: removing the contaminant shield from a structure associated with said plural light emitting elements and said sensor; thereafter, cleaning the contaminant shield; and thereafter, reinstalling the contaminant shield in said structure for another period of said shielding.

In claim 55, with respect to claim 16, a frame defining a media interaction zone; a media handling system for moving media through the media interaction zone; an interaction head which interacts with media in the interaction zone; and an optical

Art Unit: 2853

sensor system, comprising: (a) a housing; (b) a circuit board supported by the housing; (c) plural light emitting elements supported by the circuit board to illuminate an object within the hardcopy device; and (d) a sensor also supported by the circuit board to receive light reflected from the illuminated object.

In Claim 56, with respect to claim 2, wherein the housing defines an outgoing light path through which light travels from the plural light emitting elements toward the object.

In claim 57, with respect to claim 3, wherein the housing defines an incoming light path through which reflected light travels from the object toward the sensor.

In claim 58, with respect to claim 3, wherein the sensor receives diffuse light reflected from the illuminated object.

In claim 59, with respect to claim 4, a second sensor which receives specular light reflected from the illuminated object.

In claim 60, with respect to claim 5, wherein: a first of the three light emitting elements emits a blue light; a second of the three light emitting elements emits a green light; and a third of the three light emitting elements emits a red light.

In claim 61, with respect to claim 6, wherein: the first of the three light emitting elements emits a blue light having a wavelength with a centroid of 459-479 nanometers; the second of the three light emitting elements emits a green light having a wavelength with a centroid of 520-540 nanometers; and the third of the three light emitting elements emits a red light having a wavelength with a centroid of 635-655 nanometers.

In claim 62, with respect to claim 7, a fourth light emitting element which emits an orange light.

Art Unit: 2853

In claim 63, with respect to claim 8, wherein the fourth light emitting element emits an orange light having a wavelength with a centroid of 597-617 nanometers.

In claim 64, with respect to claim 9, wherein the plural light emitting elements each comprises a light emitting diode.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a sensor which receives light reflected from the illuminated object through the incoming light path for the purpose of having an optimal image while in the print mode.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles W. Stewart, Jr. whose telephone number is (571) 272-2154.

Charles Stewart, Jr. 

September 15, 2004


Stephen D. Meler
Primary Examiner